

Work Order ID 147213

June 07, 2016 1:16:28 PM

147213

Please do for Eagle
Order
June 15

Page 1

Item ID: D3697-041 Accept ***N900040100*** Setup Start ***NS1***
Revision ID: Stop ***NS2***
Item Name: Tube Assembly
Start Date: 6/8/2016 Start Qty: 1.00 ***1*** Cust Item ID:
Required Date: 6/15/2016 Req'd Qty: 1.00 ***1*** Customer:
Reference:

Approvals: Process Plan: SH Date: 6/7/16 Tooling: 2 Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
D3697	Rev B								

130 0.00
130 Large Fab
Large Fab Memo 1.05
Large Fab 1- cut at 72.00" as per dwg D3697
2- form and trim tube as per dwg D3697 using DT90033-deburr
3-weld D3697-3/-4 and D3797-1 on tube D3697-1 as per dwg D3697 using DT9003 welding jig
4-drill holes in tube in 5 pls as per dwg D3697

1 2 16-6-13

140 0.00
140 QC9- Insp visual per QSI004- Fusion Welds
QC Memo 0.00
Quality Control

2 16-06-14 9-89

DAS
9
9-89

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval 		
Description Work Order Deviation				Disposition					
								Completed By	
				Lead hand / Supervisor Approval Verification					
				QC / QA Coordinator Approval					
Root Cause		FAULT CATEGORY							
Environment ☐	☐ No Re-verification	☐ Pressure/Forced	☐ Temperature/Cure	☐ Power Loss/Surge	☐ Positioned Wrong				
Design ☐	☐ Operator	☐ Bending	☐ Set-up	☐ Folio/Program	☐ Outside Dimensions				
Doc/Data ☐	☐ Offset/Setup	☐ Centre Not Concentric	☐ BOM/Route	☐ Grain	☐ Over/Under tolerance				
Equip/Tooling ☐	☐ Supplier	☐ Cracks	☐ Broken/Damage/Defect	☐ Weld	☐ Part Incorrect				
Handling/Pre ☐	☐ Training	☐ Crimp/Kink/Ripple/Wave	☐ Inspection Incomplete/Unqualified	☐ Wrong Stock Pulled	☐ Part Lost/Missing				
Material ☐	☐ Use for Testing	☐ Cuffs	☐ Contamination	☐ Out of Sequence	☐ Part Moved				
Internal Transport ☐	☐ Poor Information	☐ Crushing	☐ Countersink	☐ Off-set	☐ Drawing				
Tribal Knowledge ☐	☐ Rushing	☐ Heat Treat	☐ Cut Too Short	☐ Misabeled	☐ Finish				
LOA ☐	☐ Product Improvement	☐ Wave/Twist in Tube	☐ Instructions Incomplete/Unclear	☐ Fit/Function	☐ Misread				
Substation ☐	☐ Process Improvement	☐ Marks/Chatter	☐ Drill Holes	☐ Misaligned/off center	☐ Turning Sequence				
Past Expiry Date ☐	☐ Manufacturing Process	OTHER : _____							
Misidentified ☐	☐ Past Due								

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June 07, 2016 1:16:28 PM

Item ID: D3697-041 Accept ***N900040100*** Setup Start ***NS1***
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 Start Date: 6/8/2016 Start Qty: 1.00 ***1*** Cust Item ID:
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Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
150	QC5- Inspect part completeness to step on W/O	0.00							DAS
150									9
QC	Memo	0.00							9-89
Quality Control									
160	Chemical Conversion Coat per QSI005 4.1	0.00							
160									
HandFinish	Memo	0.03							
Hand Finishing									
170	QC3- Inspect Part Finish	0.00							
170									
QC	Memo	0.00							
Quality Control									

① 16-06-14

① 16-06-14

DAS
30
9-89

JUN 14 2016

DQA: _____ Date: _____

**WORK ORDER NON-CONFORMANCE / UPDATE**

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QS1042) Approval 		
Description Work Order Deviation				Disposition					
							Completed By		
							Lead hand / Supervisor Approval Verification		
							QC / QA Coordinator Approval		

Root Cause				FAULT CATEGORY			
Environment ☐	☐	No Re-verification	☐	Pressure/Forced	☐	Temperature/Cure	☐
Design ☐	☐	Operator	☐	Bending	☐	Set-up	☐
Doc/Data ☐	☐	Offset/Setup	☐	Centre Not Concentric	☐	BOM/Route	☐
Equip/Tooling ☐	☐	Supplier	☐	Cracks	☐	Broken/Damage/Defect	☐
Handling/Pre ☐	☐	Training	☐	Crimp/Kink/Ripple/Wave	☐	Inspection Incomplete/Unqualified	☐
Material ☐	☐	Use for Testing	☐	Cuffs	☐	Contamination	☐
Internal Transport ☐	☐	Poor Information	☐	Crushing	☐	Countersink	☐
Tribal Knowledge ☐	☐	Rushing	☐	Heat Treat	☐	Cut Too Short	☐
LOA ☐	☐	Product Improvement	☐	Wave/Twist in Tube	☐	Instructions Incomplete/Unclear	☐
Substation ☐	☐	Process Improvement	☐	Marks/Chatter	☐	Drill Holes	☐
Past Expiry Date ☐	☐	Manufacturing Process	☐	OTHER :			
Misidentified ☐	☐	Past Due	☐				

Work Order ID 147213

June 07, 2016 1:16:28 PM

147213

Page 3

Item ID: D3697-041

Accept

N900040100Setup Start ***NS1***

Revision ID:

Item Name: Tube Assembly

Stop ***NS2***

Start Date: 6/8/2016 Start Qty: 1.00

1

Cust Item ID:

Required Date: 6/15/2016 Req'd Qty: 1.00

1

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start ***NR1***

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop ***NR2***Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool # Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

180

Identify as per dwg & Stock Location: **GA**

0.00

180

Packaging

Memo

0.00

DAS
30
9-89**JUN 14 2016**

Packaging

190

QC21- Final Inspection - Work Order Release

0.00

190

QC

Memo

0.02

JUN 16 2016

Quality Control

JUN 15 2016

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS <table style="width: 100%; border: none;"> <tr> <td style="border: none;">Skid-tube ☐</td> <td style="border: none;">Cross tube ☐</td> <td style="border: none;">Water Jet ☐</td> <td style="border: none;">Engineering ☐</td> </tr> <tr> <td style="border: none;">Machining ☐</td> <td style="border: none;">Small Fab ☐</td> <td style="border: none;">Prod. Eng. Coord. ☐</td> <td style="border: none;">Quality ☐</td> </tr> <tr> <td style="border: none;">Thermoforming ☐</td> <td style="border: none;">Finishing ☐</td> <td style="border: none;">Rec/Store/Packaging ☐</td> <td style="border: none;">Other ☐</td> </tr> <tr> <td style="border: none;">Large Fab ☐</td> <td style="border: none;">Composite ☐</td> <td style="border: none;">Supplier ☐</td> <td></td> </tr> </table>						Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐																																																	
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Picklist Print

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Page 1/1

Work Order ID: 147213

147213

Parent Item: D3697-041

D3697-041

Parent Item Name: Tube Assembly

Start Date: 6/8/2016

Required Date: 6/15/2016

Start Qty: 1.00

Required Qty: 1.00

Comments: IPP Rev:A 08-04-25 new issue DD verified by:EC
IPP Rev:B 08-07-14 revB as per dwg DD verified by:ec

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	-------------	--------------	---------------	----------------	--------

D3697-3		Manufactured	No			130	Each	1.0000	1	1			
D3697-3									**			EL 16-6-13	
Support Plate, LH													

Location Loc Qty Loc Code

WA002 1
84843 1

D3697-4		Manufactured	No			130	Each	2.0000	1	1			
D3697-4									**			EL 16-6-13	
Support Plate, RH													

Location Loc Qty Loc Code

WA002 2
84844 2

D3797-1		Manufactured	No			130	Each	1.0000	1	1			
D3797-1									**			EL 16-6-13	
Ground Plate													

Location Loc Qty Loc Code

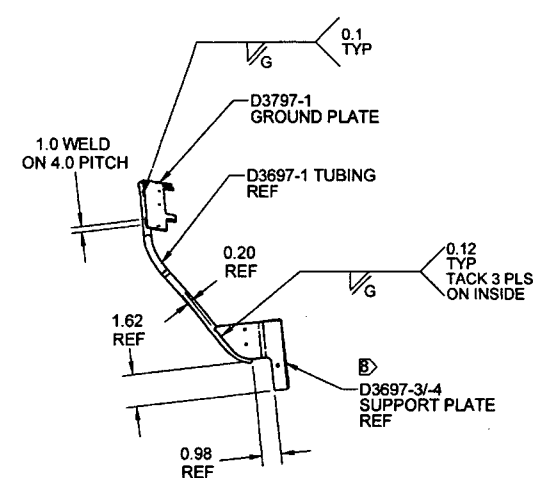
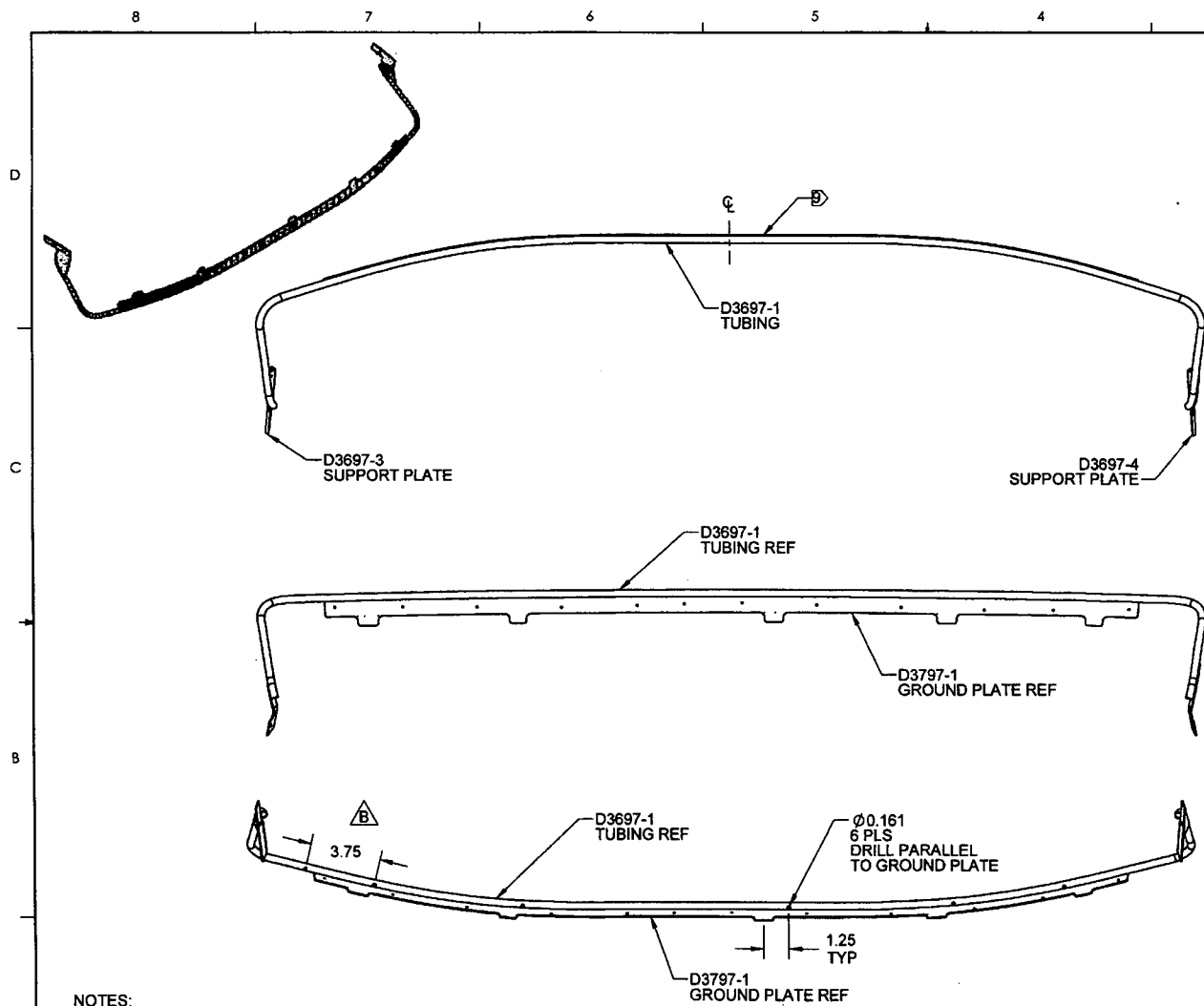
Mezz 1
82737 1

M6061T6T0.375W.049		Purchased	No			130	f	142.6300	6	6.315789			
M6061T6T0.375W.049									**			EL 16-6-13	
6061-T6 RD Tube .375 x.049W													

Location Loc Qty Loc Code

MAT013 142.63
121910 108
122147 34.63

6'



SH 6.7.16
147213

RELEASED
05-06-17

PART LIST

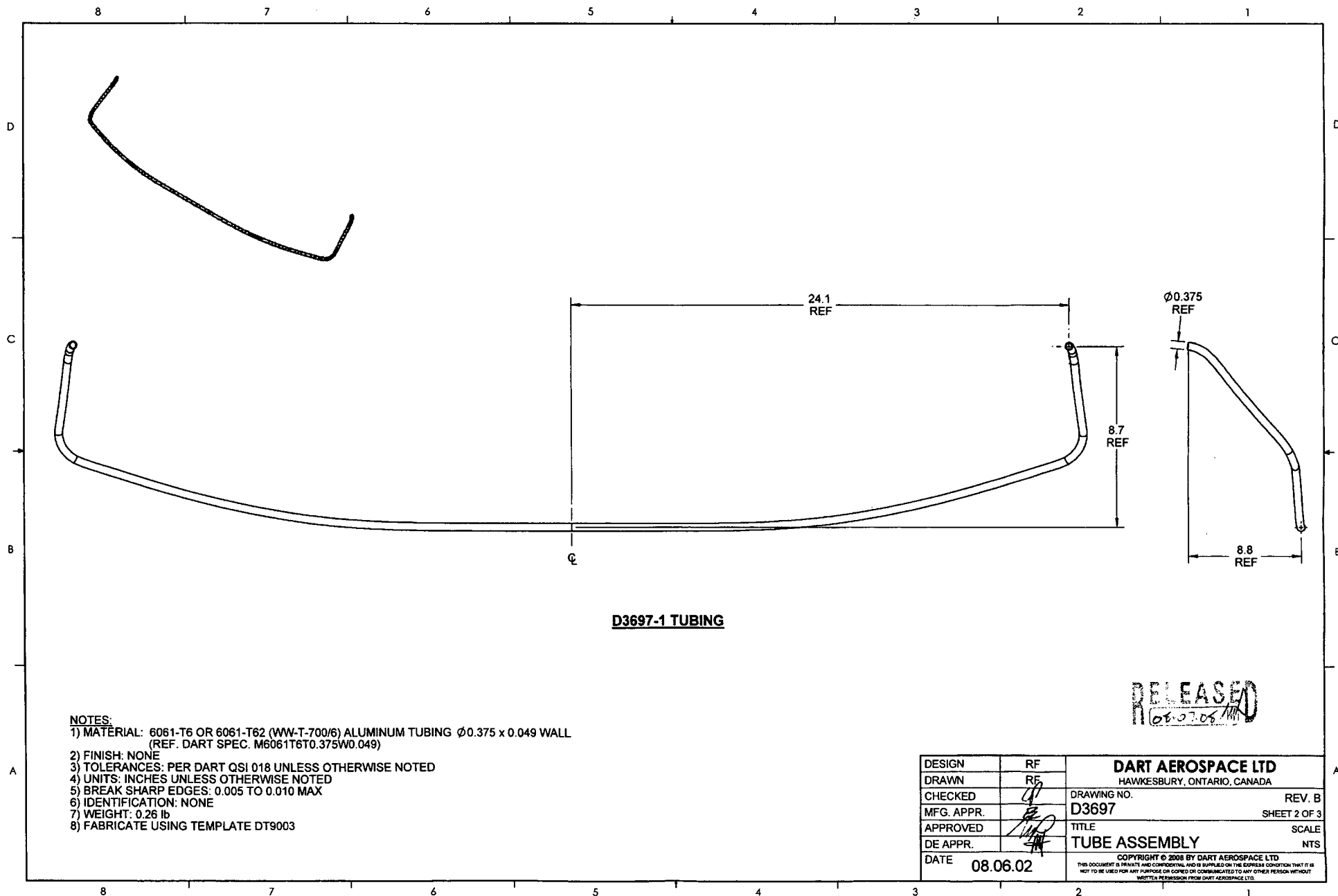
QTY	PART NUMBER	DESCRIPTION
041		
X	D3697-041	TUBE ASSEMBLY
1	D3697-1	TUBING
1	D3697-3	SUPPORT PLATE
1	D3697-4	SUPPORT PLATE
1	D3797-1	GROUND PLATE

NOTES:

- 1) WELD PER QSI 004
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: 0.55 lbs
- 8) LOCATE D3697-3/4 ON D3697-1 USING DT9009 WELDING JIG
- 9) CENTER D3797-1 GROUND PLATE ON D3697-1 TUBING

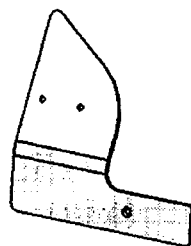
D3697-041 TUBE ASSEMBLY

B	REMOVE POWDER COAT & MASKED HATCHED AREAS. SHEET 1 ZONE A,8; ADD Ø0.161 HOLE. SHEET 1 ZONE B,7	RF	08.06.02
A	NEW ISSUE	RF	08.05.26
REV.	DESCRIPTION	BY	DATE
DESIGN	RF	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	RF		
CHECKED	RF	DRAWING NO.	REV. B
MFG. APPR.	RF	D3697	SHEET 1 OF 3
APPROVED	RF	TITLE	SCALE
DE APPR.	RF	TUBE ASSEMBLY	NTS
DATE	08.06.02	COPYRIGHT © 2008 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD	

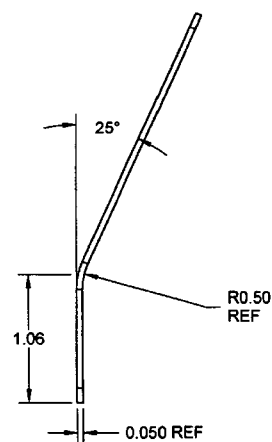
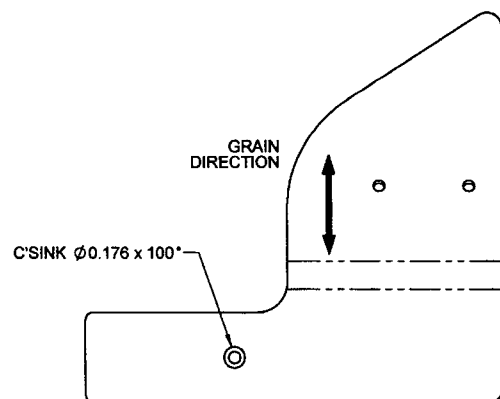




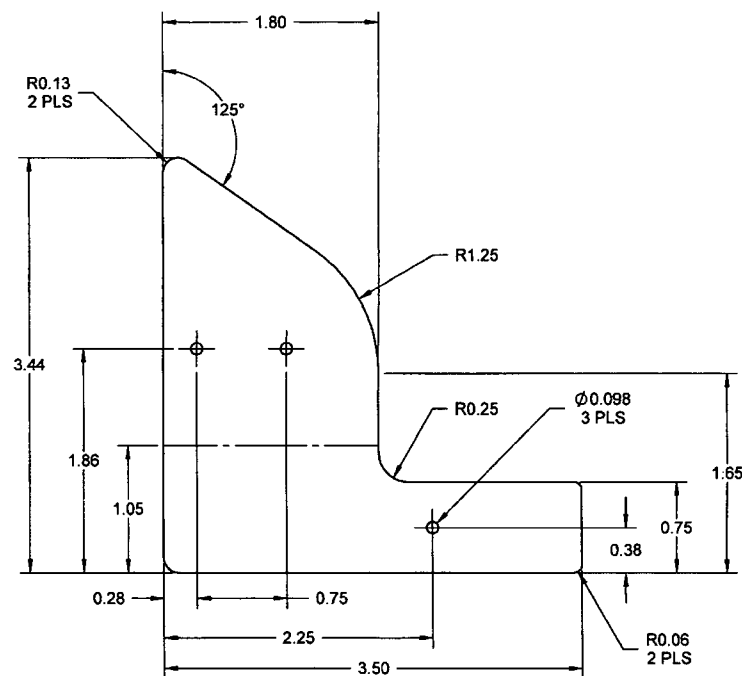
D3697-3 SUPPORT PLATE (LH SHOWN)



D3697-4 SUPPORT PLATE (RH SHOWN)



**D3697-3 SUPPORT PLATE (LH SHOWN)
(D3697-4 SUPPORT PLATE OPPOSITE)
(MAKE FROM D3697-3F FLAT PATTERN)**



D3697-3F FLAT PATTERN

NOTES:

- 1) MATERIAL: 6061-T6 (QQ-A-250/11) SHEET 0.050 THICK (REF. DART SPEC. M8061T6S.050)
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: 0.03 lbs

RELEASED
08-07-09/17

DESIGN	RF	DART AEROSPACE LTD	
DRAWN	RE	HAWKESBURY, ONTARIO, CANADA	
CHECKED		DRAWING NO.	REV. B
MFG. APPR.		D3697	SHEET 3 OF 3
APPROVED		TITLE	SCALE
DE APPR.		TUBE ASSEMBLY	NTS
DATE	08.06.02	COPYRIGHT © 2008 BY DART AEROSPACE LTD	
THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.			